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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,064	12/18/2001	Frank H. Ferrandino	0755-4112US1	3188

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345 Park Avenue
New York, NY 10154-0053

EXAMINER

PORTA, DAVID P

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

10/024,064

Applicant(s)

FERRANDINO ET AL.

Examiner

David P. Porta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 27-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 27-49 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-2, 7-8, 10, 27-29, 31-37, 43-45, and 48-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Toyota. Toyota discloses all of the elements of applicant's invention including an X-ray source (2), an X-ray focusing element (15), and an aperture (31). As seen in figure 5A, the aperture has a first end and a second end, and a passage connecting the two ends. A beryllium window provides a transparent vacuum seal. The first end is attachable to a focusing element. Vacuum sources are not explicitly disclosed, but must be inherent provided the statement that 30 is a vacuum duct. A sample holder holds mask and substrate (sample) outside of the vacuum duct at atmospheric pressure. Vacuum seals must be maintained between elements. The various labels "fluorescence system" and "microscope" are merely labels that provide no structure to distinguish the claimed elements over Toyota.

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3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamura et al. Tamura et al. discloses an X-ray source (5), a focusing element (9), and an aperture (11).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3-6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyota in view of Cotter et al. Toyota discloses all of the elements of applicant's claimed invention except for the tapered aperture. Cotter et al. teaches that it is well known in the art to provide the aperture with a taper corresponding to the desired beam shape. It would have been obvious to one of ordinary skill in the art to provide the

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aperture of Toyota with a taper motivated by the inherent benefits to throughput as discussed by Cotter et al. (column 6, lines 35-56).

7. Claims 27, 30, 38-43, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote et al. Foote et al. disclose a system with a tapered aperture connected to a detector. The system is for use with an electron microscope and the aperture is not evacuated. Official Notice is taken that the use of vacuum environment in X-ray beam paths is notoriously well known and it would have been obvious to one of ordinary skill in the art to evacuate the tapered aperture of Foote et al. to decrease X-ray attenuation by atmospheric gasses. The application of Foote et al.'s teachings to X-ray fluorescence analysis would have been obvious to one of ordinary skill in the art given the similarities to the detecting systems regardless of the origin of X-rays motivated by the inherent benefits to radiation throughput and scatter elimination.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schuster et al. discloses a system comprising a source, focusing means, apertures, and a detector. Giacconi et al. discloses focusing means attached to a detector.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Porta whose telephone number is 703-308-4852. The examiner can normally be reached on Mon-Thurs, 6:30-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



David P. Porta
Primary Examiner
Art Unit 2882

DPP
May 2, 2002